

SEQUENCE LISTING

<110> Pramod K. Srivastava

<120> ALPHA(2) MACROGLOBULIN RECEPTOR AS A HEAT SHOCK PROTEIN RECEPTOR AND USES THEREOF

<130> 8449-123

<140> 09/625,137

<141> 2000-07-25

<150> 60/209,095

<151> 2000-06-02

<160> 59

<170> FastSEQ for Windows Version 3.0

<210> 1

<211> 14849

<212> DNA

<213> Mus musculus

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Phe Ala Cys Arg Asp Gln Ile Thr Cys Ile Ser Lys Gly Trp Arg Cys
      35          40          45
Asp Gly Glu Arg Asp Cys Pro Asp Gly Ser Asp Glu Ala Pro Glu Ile
      50          55          60
Cys Pro Gln Ser Lys Ala Gln Arg Cys Pro Pro Asn Glu His Ser Cys
      65          70          75          80
Leu Gly Thr Glu Leu Cys Val Pro Met Ser Arg Leu Cys Asn Gly Ile
      85          90          95
Gln Asp Cys Met Asp Gly Ser Asp Glu Gly Ala His Cys Arg Glu Leu
      100         105         110
Arg Ala Asn Cys Ser Arg Met Gly Cys Gln His His Cys Val Pro Thr
      115         120         125
Pro Ser Gly Pro Thr Cys Tyr Cys Asn Ser Ser Phe Gln Leu Glu Ala
      130         135         140
Asp Gly Lys Thr Cys Lys Asp Phe Asp Glu Cys Ser Val Tyr Gly Thr
      145         150         155          160
Cys Ser Gln Leu Cys Thr Asn Thr Asp Gly Ser Phe Thr Cys Gly Cys
      165         170         175

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 Asn Glu Pro Val Asp Arg Pro Pro Val Leu Leu Ile Ala Asn Ser Gln
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 Asn Ile Leu Ala Thr Tyr Leu Ser Gly Ala Gln Val Ser Thr Ile Thr
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 Pro Thr Ser Thr Arg Gln Thr Thr Ala Met Asp Phe Ser Tyr Ala Asn
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 Glu Thr Val Cys Trp Val His Val Gly Asp Ser Ala Ala Gln Thr Gln
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 Leu Lys Cys Ala Arg Met Pro Gly Leu Lys Gly Phe Val Asp Glu His
 260 265 270
 Thr Ile Asn Ile Ser Leu Ser Leu His His Val Glu Gln Met Ala Ile
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 Asp Trp Leu Thr Gly Asn Phe Tyr Phe Val Asp Asp Ile Asp Asp Arg
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 Ile Phe Val Cys Asn Arg Asn Gly Asp Thr Cys Val Thr Leu Leu Asp
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 Leu Glu Leu Tyr Asn Pro Lys Gly Ile Ala Leu Asp Pro Ala Met Gly
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 Phe Pro His Gly Ile Thr Leu Asp Leu Val Ser Arg Leu Val Tyr Trp
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 Asp Pro Leu Asn Gly Trp Met Tyr Trp Thr Asp Trp Glu Glu Asp Pro

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His Arg Asp Ile Phe Val Thr Ser Lys Thr Val Leu Trp Pro Asn Gly			
690	695	700	
Leu Ser Leu Asp Ile Pro Ala Gly Arg Leu Tyr Trp Val Asp Ala Phe			
705	710	715	720
Tyr Asp Arg Ile Glu Thr Ile Leu Leu Asn Gly Thr Asp Arg Lys Ile			
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Val Tyr Glu Gly Pro Glu Leu Asn His Ala Phe Gly Leu Cys His His			
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Gly Asn Tyr Leu Phe Trp Thr Glu Tyr Arg Ser Gly Ser Val Tyr Arg			
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Tyr Val Pro Pro Gln Cys Gln Pro Gly Gln Phe Ala Cys Ala Asn			
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Leu Asp Asn Ser Asp Glu Ala Pro Ala Leu Cys His Gln His Thr Cys			
885	890	895	
Pro Ser Asp Arg Phe Lys Cys Glu Asn Asn Arg Cys Ile Pro Asn Arg			
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Trp Leu Cys Asp Gly Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu Ser			
915	920	925	
Asn Ala Thr Cys Ser Ala Arg Thr Cys Pro Pro Asn Gln Phe Ser Cys			
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Ala Ser Gly Arg Cys Ile Pro Ile Ser Trp Thr Cys Asp Leu Asp Asp			
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Asp Cys Gly Asp Arg Ser Asp Glu Ser Ala Ser Cys Ala Tyr Pro Thr			
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Cys Phe Pro Leu Thr Gln Phe Thr Cys Asn Asn Gly Arg Cys Ile Asn			
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 2580 2585 2590
 Gly Asp Gly Ser Asp Glu Ile Pro Cys Asn Lys Thr Ala Cys Gly Val
 2595 2600 2605
 Gly Glu Phe Arg Cys Arg Asp Gly Ser Cys Ile Gly Asn Ser Ser Arg

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Cys Asn Gln Phe Val Asp Cys Glu Asp Ala Ser Asp Glu Met Asn Cys		
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Ser Ala Thr Asp Cys Ser Ser Tyr Phe Arg Leu Gly Val Lys Gly Val		2640
2645	2650	2655
Leu Phe Gln Pro Cys Glu Arg Thr Ser Leu Cys Tyr Ala Pro Ser Trp		
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Val Cys Asp Gly Ala Asn Asp Cys Gly Asp Tyr Ser Asp Glu Arg Asp		
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Asp Cys Glu Asn Gly Glu Asp Glu Thr His Cys Asn Lys Phe Cys Ser		
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Glu Ala Gln Phe Glu Cys Gln Asn His Arg Cys Ile Ser Lys Gln Trp		
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Pro Lys His Phe Val Cys Asp His Asp Arg Asp Cys Ala Asp Gly Ser		
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Cys Leu Ser Arg Lys Leu Ser Gly Cys Ser Gln Asp Cys Glu Asp Leu		
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Lys Ile Gly Phe Lys Cys Arg Cys Arg Pro Gly Phe Arg Leu Lys Asp		
2965	2970	2975
Asp Gly Arg Thr Cys Ala Asp Leu Asp Glu Cys Ser Thr Thr Phe Pro		
2980	2985	2990
Cys Ser Gln Leu Cys Ile Asn Thr His Gly Ser Tyr Lys Cys Leu Cys		
2995	3000	3005
Val Glu Gly Tyr Ala Pro Arg Gly Asp Pro His Ser Cys Lys Ala		
3010	3015	3020
Val Thr Asp Glu Glu Pro Phe Leu Ile Phe Ala Asn Arg Tyr Tyr Leu		
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Arg Lys Leu Asn Leu Asp Gly Ser Asn Tyr Thr Leu Leu Lys Gln Gly		
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Leu Asn Asn Ala Val Ala Leu Ala Phe Asp Tyr Arg Glu Gln Met Ile		
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Tyr Trp Thr Gly Val Thr Thr Gln Gly Ser Met Ile Arg Arg Met His		
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Leu Asn Gly Ser Asn Val Gln Val Leu His Arg Thr Gly Leu Ser Asn		
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 Asp Lys Gly Arg Asp Thr Ile Glu Val Ser Lys Leu Asn Gly Ala Tyr
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<400> 7
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Val Val Glu Asp Lys Ile Tyr Arg Gly Lys Leu Leu Asp Asn Gly Ala
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35 40 45
Gly Leu Ala Val Asp Trp Ile Ala Gly Asn Ile Tyr Trp Val Glu Ser
50 55 60
Asn Leu Asp Gln Ile Glu Val Ala Lys Leu Asp Gly Thr Leu Arg Thr
65 70 75 80
Thr Leu Leu Ala Gly Asp Ile Glu His Pro Arg Ala Ile Ala Leu Asp
85 90 95
Pro Arg Asp Gly Ile Leu Phe Trp Thr Asp Trp Asp Ala Ser Leu Pro
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Arg Ile Glu Ala Ala Ser Met Ser Gly Ala Gly Arg Arg Thr
115 120 125

<210> 8
<211> 153
<212> PRT
<213> Homo sapiens

<400> 8
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20 25 30
Asn Ile Leu Pro Glu Lys Glu Glu Phe Pro Phe Ala Leu Gly Val Gln
35 40 45
Thr Leu Pro Gln Thr Cys Asp Glu Pro Lys Ala His Thr Ser Phe Gln
50 55 60
Ile Ser Leu Ser Val Ser Tyr Thr Gly Ser Arg Ser Ala Ser Asn Met
65 70 75 80
Ala Ile Val Asp Val Lys Met Val Ser Gly Phe Ile Pro Leu Lys Pro
85 90 95
Thr Val Lys Met Leu Glu Arg Ser Asn His Val Ser Arg Thr Glu Val
100 105 110
Ser Ser Asn His Val Leu Ile Tyr Leu Asp Lys Val Ser Asn Gln Thr
115 120 125
Leu Ser Leu Phe Phe Thr Val Leu Gln Asp Val Pro Val Arg Asp Leu
130 135 140
Lys Pro Ala Ile Val Lys Val Tyr Asp
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<211> 138
<212> PRT
<213> Homo sapiens

<400> 9
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35 40 45
Gln Ile Ser Leu Ser Val Ser Tyr Thr Gly Ser Arg Ser Ala Ser Asn
50 55 60
Met Ala Ile Val Asp Val Lys Met Val Ser Gly Phe Ile Pro Leu Lys
65 70 75 80
Pro Thr Val Lys Met Leu Glu Arg Ser Asn His Val Ser Arg Thr Glu
85 90 95
Val Ser Ser Asn His Val Leu Ile Tyr Leu Asp Lys Val Ser Asn Gln
100 105 110
Thr Leu Ser Leu Phe Phe Thr Val Leu Gln Asp Val Pro Val Arg Asp
115 120 125
Leu Lys Pro Ala Ile Val Lys Val Tyr Asp
130 135

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<211> 27
<212> PRT
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<400> 10
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1 5 10 15
Asp Val Lys Met Val Ser Gly Phe Ile Pro Leu
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<211> 126
<212> PRT
<213> Homo sapiens

<400> 11
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Val Thr Gly Glu Gly Cys Val Tyr Leu Gln Thr Ser Leu Lys Tyr Asn
20 25 30
Ile Leu Pro Glu Lys Glu Glu Phe Pro Phe Ala Leu Gly Val Gln Thr
35 40 45
Leu Pro Gln Thr Cys Asp Glu Pro Lys Ala His Thr Ser Phe Gln Ile
50 55 60
Ser Leu Ser Val Ser Tyr Thr Gly Ser Arg Ser Ala Ser Asn Met Ala
65 70 75 80
Ile Val Asp Val Lys Met Val Ser Gly Phe Ile Pro Leu Lys Pro Thr
85 90 95
Val Lys Met Leu Glu Arg Ser Asn His Val Ser Arg Thr Glu Val Ser
100 105 110
Ser Asn His Val Leu Ile Tyr Leu Asp Lys Val Ser Asn Gln
115 120 125

<210> 12
<211> 111
<212> PRT
<213> Homo sapiens

<400> 12
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20								25					30		
Ile	Leu	Pro	Glu	Lys	Glu	Glu	Phe	Pro	Phe	Ala	Leu	Gly	Val	Gln	Thr
35							40					45			
Leu	Pro	Gln	Thr	Cys	Asp	Glu	Pro	Lys	Ala	His	Thr	Ser	Phe	Gln	Ile
50							55				60				
Ser	Leu	Ser	Val	Ser	Tyr	Thr	Gly	Ser	Arg	Ser	Ala	Ser	Asn	Met	Ala
65					70			75					80		
Ile	Val	Asp	Val	Lys	Met	Val	Ser	Gly	Phe	Ile	Pro	Leu	Lys	Pro	Thr
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Val	Lys	Met	Leu	Glu	Arg	Ser	Asn	His	Val	Ser	Arg	Thr	Glu	Val	
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<210> 13
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 <212> PRT
 <213> Homo sapiens

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							20			25			30		
Ile	Leu	Pro	Glu	Lys	Glu	Glu	Phe	Pro	Phe	Ala	Leu	Gly	Val	Gln	Thr
							35			40			45		
Leu	Pro	Gln	Thr	Cys	Asp	Glu	Pro	Lys	Ala	His	Thr	Ser	Phe	Gln	Ile
							50			55			60		
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Ile															

<210> 14
 <211> 101
 <212> PRT
 <213> Homo sapiens

	<400> 14														
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Ala	His	Thr	Ser	Phe	Gln	Ile	Ser	Leu	Ser	Val	Ser	Tyr	Thr	Gly	Ser
							35			40			45		
Arg	Ser	Ala	Ser	Asn	Met	Ala	Ile	Val	Asp	Val	Lys	Met	Val	Ser	Gly
							50			55			60		
Phe	Ile	Pro	Leu	Lys	Pro	Thr	Val	Lys	Met	Leu	Glu	Arg	Ser	Asn	His
							65			70			75		80
Val	Ser	Arg	Thr	Glu	Val	Ser	Ser	Asn	His	Val	Leu	Ile	Tyr	Leu	Asp
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Lys	Val	Ser	Asn	Gln											
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<210> 15
 <211> 76
 <212> PRT
 <213> Homo sapiens

	<400> 15													
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Ala	His	Thr	Ser	Phe	Gln	Ile	Ser	Leu	Ser	Val	Ser	Tyr	Thr	Gly	Ser
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Arg	Ser	Ala	Ser	Asn	Met	Ala	Ile	Val	Asp	Val	Lys	Met	Val	Ser	Gly
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Met	Leu	Glu	Arg	Ser	Asn	His	Val	Ser	Arg	Thr	Glu	Val	Ser	Ser	Asn
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<213> Homo sapiens															
<400> 18															
Gln	Thr	Cys	Asp	Glu	Pro	Lys	Ala	His	Thr	Ser	Phe	Gln	Ile	Ser	Leu
1				5				10					15		
Ser	Val	Ser	Tyr	Thr	Gly	Ser	Arg	Ser	Ala	Ser	Asn	Met	Ala	Ile	Val
			20				25					30			
Asp	Val	Lys	Met	Val	Ser	Gly	Phe	Ile	Pro	Leu	Lys	Pro	Thr	Val	Lys
			35				40					45			
Met	Leu	Glu	Arg	Ser	Asn	His	Val	Ser	Arg	Thr	Glu	Val	Ser	Ser	Asn
			50				55				60				
His	Val	Leu	Ile	Tyr	Leu	Asp	Lys	Val	Ser	Asn	Gln				
			65				70				75				
<210> 19															
<211> 31															

<212> PRT
 <213> Homo sapiens

<400> 19
 Gln Thr Cys Asp Glu Pro Lys Ala His Thr Ser Phe Gln Ile Ser Leu
 1 5 10 15
 Ser Val Ser Tyr Thr Gly Ser Arg Ser Ala Ser Asn Met Ala Ile
 20 . 25 30

<210> 20
 <211> 44
 <212> PRT
 <213> Homo sapiens

<400> 20
 Lys Thr Cys Ser Pro Lys Gln Phe Ala Cys Arg Asp Gln Ile Thr Cys
 1 5 10 15
 Ile Ser Lys Gly Trp Arg Cys Asp Gly Glu Arg Asp Cys Pro Asp Gly
 20 25 30
 Ser Asp Glu Ala Pro Glu Ile Cys Pro Gln Ser Lys
 35 40

<210> 21
 <211> 86
 <212> PRT
 <213> Homo sapiens

<400> 21
 Lys Thr Cys Ser Pro Lys Gln Phe Ala Cys Arg Asp Gln Ile Thr Cys
 1 5 10 15
 Ile Ser Lys Gly Trp Arg Cys Asp Gly Glu Arg Asp Cys Pro Asp Gly
 20 25 30
 Ser Asp Glu Ala Pro Glu Ile Cys Pro Gln Ser Lys Ala Gln Arg Cys
 35 40 45
 Gln Pro Asn Glu His Asn Cys Leu Gly Thr Glu Leu Cys Val Pro Met
 50 55 60
 Ser Arg Leu Cys Asn Gly Val Gln Asp Cys Met Asp Gly Ser Asp Glu
 65 70 75 80
 Gly Pro His Cys Arg Glu
 85

<210> 22
 <211> 43
 <212> PRT
 <213> Homo sapiens

<400> 22
 Lys Ala Gln Arg Cys Gln Pro Asn Glu His Asn Cys Leu Gly Thr Glu
 1 5 10 15
 Leu Cys Val Pro Met Ser Arg Leu Cys Asn Gly Val Gln Asp Cys Met
 20 25 30
 Asp Gly Ser Asp Glu Gly Pro His Cys Arg Glu
 35 40

<210> 23
 <211> 42
 <212> PRT
 <213> Homo sapiens

<400> 23
 Gln Cys Gln Pro Gly Glu Phe Ala Cys Ala Asn Ser Arg Cys Ile Gln

1 5 10 15
Glu Arg Trp Lys Cys Asp Gly Asp Asn Asp Cys Leu Asp Asn Ser Asp
20 25 30
Glu Ala Pro Ala Leu Cys His Gln His Thr
35 40

<210> 24
<211> 82
<212> PRT
<213> Homo sapiens

<400> 24
Gln Cys Gln Pro Gly Glu Phe Ala Cys Ala Asn Ser Arg Cys Ile Gln
1 5 10 15
Glu Arg Trp Lys Cys Asp Gly Asp Asn Asp Cys Leu Asp Asn Ser Asp
20 25 30
Glu Ala Pro Ala Leu Cys His Gln His Thr Cys Pro Ser Asp Arg Phe
35 40 45
Lys Cys Glu Asn Asn Arg Cys Ile Pro Asn Arg Trp Leu Cys Asp Gly
50 55 60
Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu Ser Asn Ala Thr Cys Ser
65 70 75 80
Ala Arg

<210> 25
<211> 122
<212> PRT
<213> Homo sapiens

<400> 25
Gln Cys Gln Pro Gly Glu Phe Ala Cys Ala Asn Ser Arg Cys Ile Gln
1 5 10 15
Glu Arg Trp Lys Cys Asp Gly Asp Asn Asp Cys Leu Asp Asn Ser Asp
20 25 30
Glu Ala Pro Ala Leu Cys His Gln His Thr Cys Pro Ser Asp Arg Phe
35 40 45
Lys Cys Glu Asn Asn Arg Cys Ile Pro Asn Arg Trp Leu Cys Asp Gly
50 55 60
Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu Ser Asn Ala Thr Cys Ser
65 70 75 80
Ala Arg Thr Cys Pro Pro Asn Gln Phe Ser Cys Ala Ser Gly Arg Cys
85 90 95
Ile Pro Ile Ser Trp Thr Cys Asp Leu Asp Asp Asp Cys Gly Asp Arg
100 105 110
Ser Asp Glu Ser Ala Ser Cys Ala Tyr Pro
115 120

<210> 26
<211> 161
<212> PRT
<213> Homo sapiens

<400> 26
Gln Cys Gln Pro Gly Glu Phe Ala Cys Ala Asn Ser Arg Cys Ile Gln
1 5 10 15
Glu Arg Trp Lys Cys Asp Gly Asp Asn Asp Cys Leu Asp Asn Ser Asp
20 25 30
Glu Ala Pro Ala Leu Cys His Gln His Thr Cys Pro Ser Asp Arg Phe
35 40 45
Lys Cys Glu Asn Asn Arg Cys Ile Pro Asn Arg Trp Leu Cys Asp Gly

50	55	60
Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu Ser Asn Ala Thr Cys Ser		
65	70	75
Ala Arg Thr Cys Pro Pro Asn Gln Phe Ser Cys Ala Ser Gly Arg Cys		80
85	90	95
Ile Pro Ile Ser Trp Thr Cys Asp Leu Asp Asp Asp Cys Gly Asp Arg		
100	105	110
Ser Asp Glu Ser Ala Ser Cys Ala Tyr Pro Thr Cys Phe Pro Leu Thr		
115	120	125
Gln Phe Thr Cys Asn Asn Gly Arg Cys Ile Asn Ile Asn Trp Arg Cys		
130	135	140
Asp Asn Asp Asn Asp Cys Gly Asp Asn Ser Asp Glu Ala Gly Cys Ser		
145	150	155
His		160

<210> 27
 <211> 208
 <212> PRT
 <213> Homo sapiens

<400> 27			
Gln Cys Gln Pro Gly Glu Phe Ala Cys Ala Asn Ser Arg Cys Ile Gln			
1	5	10	15
Glu Arg Trp Lys Cys Asp Gly Asp Asn Asp Cys Leu Asp Asn Ser Asp			
20	25	30	
Glu Ala Pro Ala Leu Cys His Gln His Thr Cys Pro Ser Asp Arg Phe			
35	40	45	
Lys Cys Glu Asn Asn Arg Cys Ile Pro Asn Arg Trp Leu Cys Asp Gly			
50	55	60	
Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu Ser Asn Ala Thr Cys Ser			
65	70	75	80
Ala Arg Thr Cys Pro Pro Asn Gln Phe Ser Cys Ala Ser Gly Arg Cys			
85	90	95	
Ile Pro Ile Ser Trp Thr Cys Asp Leu Asp Asp Asp Cys Gly Asp Arg			
100	105	110	
Ser Asp Glu Ser Ala Ser Cys Ala Tyr Pro Thr Cys Phe Pro Leu Thr			
115	120	125	
Gln Phe Thr Cys Asn Asn Gly Arg Cys Ile Asn Ile Asn Trp Arg Cys			
130	135	140	
Asp Asn Asp Asn Asp Cys Gly Asp Asn Ser Asp Glu Ala Gly Cys Ser			
145	150	155	160
His Ser Cys Ser Ser Thr Gln Phe Lys Cys Asn Ser Gly Arg Cys Ile			
165	170	175	
Pro Glu His Trp Thr Cys Asp Gly Asp Asn Asp Cys Gly Asp Tyr Ser			
180	185	190	
Asp Glu Thr His Ala Asn Cys Thr Asn Gln Ala Thr Arg Pro Pro Gly			
195	200	205	

<210> 28
 <211> 150
 <212> PRT
 <213> Homo sapiens

<400> 28			
Gln Cys Gln Pro Gly Glu Phe Ala Cys Ala Asn Ser Arg Cys Ile Gln			
1	5	10	15
Glu Arg Trp Lys Cys Asp Gly Asp Asn Asp Cys Leu Asp Asn Ser Asp			
20	25	30	
Glu Ala Pro Ala Leu Cys His Gln His Thr Cys Pro Ser Asp Arg Phe			
35	40	45	

Lys Cys Glu Asn Asn Arg Cys Ile Pro Asn Arg Trp Leu Cys Asp Gly
 50 55 60
 Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu Ser Asn Ala Thr Cys Ser
 65 70 75 80
 Ala Arg Thr Cys Pro Pro Asn Gln Phe Ser Cys Ala Ser Gly Arg Cys
 85 90 95
 Ile Pro Ile Ser Trp Thr Cys Asp Leu Asp Asp Asp Cys Gly Asp Arg
 100 105 110
 Ser Asp Glu Ser Ala Ser Cys Ala Tyr Pro Thr Cys Phe Pro Leu Thr
 115 120 125
 Gln Phe Thr Cys Asn Asn Gly Arg Cys Ile Asn Ile Asn Trp Arg Cys
 130 135 140
 Asp Asn Asp Asn Asp Cys
 145 150

<210> 29
 <211> 231
 <212> PRT
 <213> Homo sapiens

<400> 29
 Gln Cys Gln Pro Gly Glu Phe Ala Cys Ala Asn Ser Arg Cys Ile Gln
 1 5 10 15
 Glu Arg Trp Lys Cys Asp Gly Asp Asn Asp Cys Leu Asp Asn Ser Asp
 20 25 30
 Glu Ala Pro Ala Leu Cys His Gln His Thr Cys Pro Ser Asp Arg Phe
 35 40 45
 Lys Cys Glu Asn Asn Arg Cys Ile Pro Asn Arg Trp Leu Cys Asp Gly
 50 55 60
 Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu Ser Asn Ala Thr Cys Ser
 65 70 75 80
 Ala Arg Thr Cys Pro Pro Asn Gln Phe Ser Cys Ala Ser Gly Arg Cys
 85 90 95
 Ile Pro Ile Ser Trp Thr Cys Asp Leu Asp Asp Asp Cys Gly Asp Arg
 100 105 110
 Ser Asp Glu Ser Ala Ser Cys Ala Tyr Pro Thr Cys Phe Pro Leu Thr
 115 120 125
 Gln Phe Thr Cys Asn Asn Gly Arg Cys Ile Asn Ile Asn Trp Arg Cys
 130 135 140
 Asp Asn Asp Asn Asp Cys Gly Asp Asn Ser Asp Glu Ala Gly Cys Ser
 145 150 155 160
 His Ser Cys Ser Ser Thr Gln Phe Lys Cys Asn Ser Gly Arg Cys Ile
 165 170 175
 Pro Glu His Trp Thr Cys Asp Gly Asp Asn Asp Cys Gly Asp Tyr Ser
 180 185 190
 Asp Glu Thr His Ala Asn Cys Thr Asn Gln Ala Thr Arg Pro Pro Gly
 195 200 205
 Gly Cys His Thr Asp Glu Phe Gln Cys Arg Leu Asp Gly Leu Cys Ile
 210 215 220
 Pro Leu Arg Trp Arg Cys Asp
 225 230

<210> 30
 <211> 40
 <212> PRT
 <213> Homo sapiens

<400> 30
 Cys Pro Ser Asp Arg Phe Lys Cys Glu Asn Asn Arg Cys Ile Pro Asn
 1 5 10 15
 Arg Trp Leu Cys Asp Gly Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu

20	25	30
Ser Asn Ala Thr Cys Ser Ala Arg		
35	40	
<210> 31		
<211> 80		
<212> PRT		
<213> Homo sapiens		
<400> 31		
Cys Pro Ser Asp Arg Phe Lys Cys Glu Asn Asn Arg Cys Ile Pro Asn		
1 5 10 15		
Arg Trp Leu Cys Asp Gly Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu		
20 25 30		
Ser Asn Ala Thr Cys Ser Ala Arg Thr Cys Pro Pro Asn Gln Phe Ser		
35 40 45		
Cys Ala Ser Gly Arg Cys Ile Pro Ile Ser Trp Thr Cys Asp Leu Asp		
50 55 60		
Asp Asp Cys Gly Asp Arg Ser Asp Glu Ser Ala Ser Cys Ala Tyr Pro		
65 70 75 80		
<210> 32		
<211> 119		
<212> PRT		
<213> Homo sapiens		
<400> 32		
Cys Pro Ser Asp Arg Phe Lys Cys Glu Asn Asn Arg Cys Ile Pro Asn		
1 5 10 15		
Arg Trp Leu Cys Asp Gly Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu		
20 25 30		
Ser Asn Ala Thr Cys Ser Ala Arg Thr Cys Pro Pro Asn Gln Phe Ser		
35 40 45		
Cys Ala Ser Gly Arg Cys Ile Pro Ile Ser Trp Thr Cys Asp Leu Asp		
50 55 60		
Asp Asp Cys Gly Asp Arg Ser Asp Glu Ser Ala Ser Cys Ala Tyr Pro		
65 70 75 80		
Thr Cys Phe Pro Leu Thr Gln Phe Thr Cys Asn Asn Gly Arg Cys Ile		
85 90 95		
Asn Ile Asn Trp Arg Cys Asp Asn Asp Asn Asp Cys Gly Asp Asn Ser		
100 105 110		
Asp Glu Ala Gly Cys Ser His		
115		
<210> 33		
<211> 166		
<212> PRT		
<213> Homo sapiens		
<400> 33		
Cys Pro Ser Asp Arg Phe Lys Cys Glu Asn Asn Arg Cys Ile Pro Asn		
1 5 10 15		
Arg Trp Leu Cys Asp Gly Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu		
20 25 30		
Ser Asn Ala Thr Cys Ser Ala Arg Thr Cys Pro Pro Asn Gln Phe Ser		
35 40 45		
Cys Ala Ser Gly Arg Cys Ile Pro Ile Ser Trp Thr Cys Asp Leu Asp		
50 55 60		
Asp Asp Cys Gly Asp Arg Ser Asp Glu Ser Ala Ser Cys Ala Tyr Pro		
65 70 75 80		
Thr Cys Phe Pro Leu Thr Gln Phe Thr Cys Asn Asn Gly Arg Cys Ile		

	85		90		95										
Asn	Ile	Asn	Trp	Arg	Cys	Asp	Asn	Asp	Cys	Gly	Asp	Asn	Ser		
			100			105				110					
Asp	Glu	Ala	Gly	Cys	Ser	His	Ser	Cys	Ser	Thr	Gln	Phe	Lys	Cys	
			115			120				125					
Asn	Ser	Gly	Arg	Cys	Ile	Pro	Glu	His	Trp	Thr	Cys	Asp	Gly	Asp	Asn
			130			135				140					
Asp	Cys	Gly	Asp	Tyr	Ser	Asp	Glu	Thr	His	Ala	Asn	Cys	Thr	Asn	Gln
	145					150				155				160	
Ala	Thr	Arg	Pro	Pro	Gly										
					165										

<210> 34
 <211> 108
 <212> PRT
 <213> Homo sapiens

	<400>	34														
Cys	Pro	Ser	Asp	Arg	Phe	Lys	Cys	Glu	Asn	Asn	Arg	Cys	Ile	Pro	Asn	
	1				5			10			15					
Arg	Trp	Leu	Cys	Asp	Gly	Asp	Asn	Asp	Cys	Gly	Asn	Ser	Glu	Asp	Glu	
			20			25							30			
Ser	Asn	Ala	Thr	Cys	Ser	Ala	Arg	Thr	Cys	Pro	Pro	Asn	Gln	Phe	Ser	
			35			40						45				
Cys	Ala	Ser	Gly	Arg	Cys	Ile	Pro	Ile	Ser	Trp	Thr	Cys	Asp	Leu	Asp	
	50				55			60								
Asp	Asp	Cys	Gly	Asp	Arg	Ser	Asp	Glu	Ser	Ala	Ser	Cys	Ala	Tyr	Pro	
	65				70			75					80			
Thr	Cys	Phe	Pro	Leu	Thr	Gln	Phe	Thr	Cys	Asn	Asn	Gly	Arg	Cys	Ile	
			85			90							95			
Asn	Ile	Asn	Trp	Arg	Cys	Asp	Asn	Asp	Asn	Asp	Cys					
			100				105									

<210> 35
 <211> 289
 <212> PRT
 <213> Homo sapiens

	<400>	35														
Cys	Pro	Ser	Asp	Arg	Phe	Lys	Cys	Glu	Asn	Asn	Arg	Cys	Ile	Pro	Asn	
	1				5			10			15					
Arg	Trp	Leu	Cys	Asp	Gly	Asp	Asn	Asp	Cys	Gly	Asn	Ser	Glu	Asp	Glu	
			20			25							30			
Ser	Asn	Ala	Thr	Cys	Ser	Ala	Arg	Thr	Cys	Pro	Pro	Asn	Gln	Phe	Ser	
			35			40						45				
Cys	Ala	Ser	Gly	Arg	Cys	Ile	Pro	Ile	Ser	Trp	Thr	Cys	Asp	Leu	Asp	
	50				55			60								
Asp	Asp	Cys	Gly	Asp	Arg	Ser	Asp	Glu	Ser	Ala	Ser	Cys	Ala	Tyr	Pro	
	65				70			75					80			
Thr	Cys	Phe	Pro	Leu	Thr	Gln	Phe	Thr	Cys	Asn	Asn	Gly	Arg	Cys	Ile	
			85			90							95			
Asn	Ile	Asn	Trp	Arg	Cys	Asp	Asn	Asp	Asn	Asp	Cys	Gly	Asp	Asn	Ser	
			100				105						110			
Asp	Glu	Ala	Gly	Cys	Ser	His	Ser	Cys	Ser	Ser	Thr	Gln	Phe	Lys	Cys	
			115			120						125				
Asn	Ser	Gly	Arg	Cys	Ile	Pro	Glu	His	Trp	Thr	Cys	Asp	Gly	Asp	Asn	
			130			135					140					
Asp	Cys	Gly	Asp	Tyr	Ser	Asp	Glu	Thr	His	Ala	Asn	Cys	Thr	Asn	Gln	
	145				150			155					160			
Ala	Thr	Arg	Pro	Pro	Gly	Gly	Cys	His	Thr	Asp	Glu	Phe	Gln	Cys	Arg	
			165				170						175			

Leu Asp Gly Leu Cys Ile Pro Leu Arg Trp Arg Cys Asp Gly Asp Thr
 180 185 190
 Asp Cys Met Asp Ser Ser Asp Glu Lys Ser Cys Glu Gly Val Thr His
 195 200 205
 Val Cys Asp Pro Ser Val Lys Phe Gly Cys Lys Asp Ser Ala Arg Cys
 210 215 220
 Ile Ser Lys Ala Trp Val Cys Asp Gly Asp Asn Asp Cys Glu Asp Asn
 225 230 235 240
 Ser Asp Glu Glu Asn Cys Glu Ser Leu Ala Cys Arg Pro Pro Ser His
 245 250 255
 Pro Cys Ala Asn Asn Thr Ser Val Cys Leu Pro Pro Asp Lys Leu Cys
 260 265 270
 Asp Gly Asn Asp Asp Cys Gly Asp Gly Ser Asp Glu Gly Glu Leu Cys
 275 280 285
 Asp

<210> 36
 <211> 40
 <212> PRT
 <213> Homo sapiens

<400> 36
 Thr Cys Pro Pro Asn Gln Phe Ser Cys Ala Ser Gly Arg Cys Ile Pro
 1 5 10 15
 Ile Ser Trp Thr Cys Asp Leu Asp Asp Asp Cys Gly Asp Arg Ser Asp
 20 25 30
 Glu Ser Ala Ser Cys Ala Tyr Pro
 35 40

<210> 37
 <211> 79
 <212> PRT
 <213> Homo sapiens

<400> 37
 Thr Cys Pro Pro Asn Gln Phe Ser Cys Ala Ser Gly Arg Cys Ile Pro
 1 5 10 15
 Ile Ser Trp Thr Cys Asp Leu Asp Asp Asp Cys Gly Asp Arg Ser Asp
 20 25 30
 Glu Ser Ala Ser Cys Ala Tyr Pro Thr Cys Phe Pro Leu Thr Gln Phe
 35 40 45
 Thr Cys Asn Asn Gly Arg Cys Ile Asn Ile Asn Trp Arg Cys Asp Asn
 50 55 60
 Asp Asn Asp Cys Gly Asp Asn Ser Asp Glu Ala Gly Cys Ser His
 65 70 75

<210> 38
 <211> 126
 <212> PRT
 <213> Homo sapiens

<400> 38
 Thr Cys Pro Pro Asn Gln Phe Ser Cys Ala Ser Gly Arg Cys Ile Pro
 1 5 10 15
 Ile Ser Trp Thr Cys Asp Leu Asp Asp Asp Cys Gly Asp Arg Ser Asp
 20 25 30
 Glu Ser Ala Ser Cys Ala Tyr Pro Thr Cys Phe Pro Leu Thr Gln Phe
 35 40 45
 Thr Cys Asn Asn Gly Arg Cys Ile Asn Ile Asn Trp Arg Cys Asp Asn
 50 55 60

Asp Asn Asp Cys Gly Asp Asn Ser Asp Glu Ala Gly Cys Ser His Ser
 65 70 75 80
 Cys Ser Ser Thr Gln Phe Lys Cys Asn Ser Gly Arg Cys Ile Pro Glu
 85 90 95
 His Trp Thr Cys Asp Gly Asp Asn Asp Cys Gly Asp Tyr Ser Asp Glu
 100 105 110
 Thr His Ala Asn Cys Thr Asn Gln Ala Thr Arg Pro Pro Gly
 115 120 125

<210> 39
 <211> 68
 <212> PRT
 <213> Homo sapiens

<400> 39
 Thr Cys Pro Pro Asn Gln Phe Ser Cys Ala Ser Gly Arg Cys Ile Pro
 1 5 10 15
 Ile Ser Trp Thr Cys Asp Leu Asp Asp Asp Cys Gly Asp Arg Ser Asp
 20 25 30
 Glu Ser Ala Ser Cys Ala Tyr Pro Thr Cys Phe Pro Leu Thr Gln Phe
 35 40 45
 Thr Cys Asn Asn Gly Arg Cys Ile Asn Ile Asn Trp Arg Cys Asp Asn
 50 55 60

Asp Asn Asp Cys
 65

<210> 40
 <211> 248
 <212> PRT
 <213> Homo sapiens

<400> 40
 Cys Pro Pro Asn Gln Phe Ser Cys Ala Ser Gly Arg Cys Ile Pro Ile
 1 5 10 15
 Ser Trp Thr Cys Asp Leu Asp Asp Asp Cys Gly Asp Arg Ser Asp Glu
 20 25 30
 Ser Ala Ser Cys Ala Tyr Pro Thr Cys Phe Pro Leu Thr Gln Phe Thr
 35 40 45
 Cys Asn Asn Gly Arg Cys Ile Asn Ile Asn Trp Arg Cys Asp Asn Asp
 50 55 60
 Asn Asp Cys Gly Asp Asn Ser Asp Glu Ala Gly Cys Ser His Ser Cys
 65 70 75 80
 Ser Ser Thr Gln Phe Lys Cys Asn Ser Gly Arg Cys Ile Pro Glu His
 85 90 95
 Trp Thr Cys Asp Gly Asp Asn Asp Cys Gly Asp Tyr Ser Asp Glu Thr
 100 105 110
 His Ala Asn Cys Thr Asn Gln Ala Thr Arg Pro Pro Gly Gly Cys His
 115 120 125
 Thr Asp Glu Phe Gln Cys Arg Leu Asp Gly Leu Cys Ile Pro Leu Arg
 130 135 140
 Trp Arg Cys Asp Gly Asp Thr Asp Cys Met Asp Ser Ser Asp Glu Lys
 145 150 155 160
 Ser Cys Glu Gly Val Thr His Val Cys Asp Pro Ser Val Lys Phe Gly
 165 170 175
 Cys Lys Asp Ser Ala Arg Cys Ile Ser Lys Ala Trp Val Cys Asp Gly
 180 185 190
 Asp Asn Asp Cys Glu Asp Asn Ser Asp Glu Glu Asn Cys Glu Ser Leu
 195 200 205
 Ala Cys Arg Pro Pro Ser His Pro Cys Ala Asn Asn Thr Ser Val Cys
 210 215 220
 Leu Pro Pro Asp Lys Leu Cys Asp Gly Asn Asp Asp Cys Gly Asp Gly

225 Ser Asp Glu Gly Glu Leu Cys Asp 245	230	235	240
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<210> 41
<211> 39
<212> PRT
<213> Homo sapiens

<400> 41
Thr Cys Phe Pro Leu Thr Gln Phe Thr Cys Asn Asn Gly Arg Cys Ile
1 5 10 15
Asn Ile Asn Trp Arg Cys Asp Asn Asp Asn Asp Cys Gly Asp Asn Ser
20 25 30
Asp Glu Ala Gly Cys Ser His
35

<210> 42
<211> 86
<212> PRT
<213> Homo sapiens

<400> 42
Thr Cys Phe Pro Leu Thr Gln Phe Thr Cys Asn Asn Gly Arg Cys Ile
1 5 10 15
Asn Ile Asn Trp Arg Cys Asp Asn Asp Asn Asp Cys Gly Asp Asn Ser
20 25 30
Asp Glu Ala Gly Cys Ser His Ser Cys Ser Ser Thr Gln Phe Lys Cys
35 40 45
Asn Ser Gly Arg Cys Ile Pro Glu His Trp Thr Cys Asp Gly Asp Asn
50 55 60
Asp Cys Gly Asp Tyr Ser Asp Glu Thr His Ala Asn Cys Thr Asn Gln
65 70 75 80
Ala Thr Arg Pro Pro Gly
85

<210> 43
<211> 169
<212> PRT
<213> Homo sapiens

<400> 43
Thr Cys Phe Pro Leu Thr Gln Phe Thr Cys Asn Asn Gly Arg Cys Ile
1 5 10 15
Asn Ile Asn Trp Arg Cys Asp Asn Asp Asn Asp Cys Gly Asp Asn Ser
20 25 30
Asp Glu Ala Gly Cys Ser His Ser Cys Ser Ser Thr Gln Phe Lys Cys
35 40 45
Asn Ser Gly Arg Cys Ile Pro Glu His Trp Thr Cys Asp Gly Asp Asn
50 55 60
Asp Cys Gly Asp Tyr Ser Asp Glu Thr His Ala Asn Cys Thr Asn Gln
65 70 75 80
Ala Thr Arg Pro Pro Gly Gly Cys His Thr Asp Glu Phe Gln Cys Arg
85 90 95
Leu Asp Gly Leu Cys Ile Pro Leu Arg Trp Arg Cys Asp Gly Asp Thr
100 105 110
Asp Cys Met Asp Ser Ser Asp Glu Lys Ser Cys Glu Gly Val Thr His
115 120 125
Val Cys Asp Pro Ser Val Lys Phe Gly Cys Lys Asp Ser Ala Arg Cys
130 135 140
Ile Ser Lys Ala Trp Val Cys Asp Gly Asp Asn Asp Cys Glu Asp Asn

145 150 155 160
Ser Asp Glu Glu Asn Cys Glu Ser Leu
 165

<210> 44
<211> 209
<212> PRT
<213> Homo sapiens

<400> 44
Thr Cys Phe Pro Leu Thr Gln Phe Thr Cys Asn Asn Gly Arg Cys Ile
 1 5 10 15
Asn Ile Asn Trp Arg Cys Asp Asn Asp Asn Asp Cys Gly Asp Asn Ser
 20 25 30
Asp Glu Ala Gly Cys Ser His Ser Cys Ser Ser Thr Gln Phe Lys Cys
 35 40 45
Asn Ser Gly Arg Cys Ile Pro Glu His Trp Thr Cys Asp Gly Asp Asn
 50 55 60
Asp Cys Gly Asp Tyr Ser Asp Glu Thr His Ala Asn Cys Thr Asn Gln
 65 70 75 80
Ala Thr Arg Pro Pro Gly Gly Cys His Thr Asp Glu Phe Gln Cys Arg
 85 90 95
Leu Asp Gly Leu Cys Ile Pro Leu Arg Trp Arg Cys Asp Gly Asp Thr
 100 105 110
Asp Cys Met Asp Ser Ser Asp Glu Lys Ser Cys Glu Gly Val Thr His
 115 120 125
Val Cys Asp Pro Ser Val Lys Phe Gly Cys Lys Asp Ser Ala Arg Cys
 130 135 140
Ile Ser Lys Ala Trp Val Cys Asp Gly Asp Asn Asp Cys Glu Asp Asn
 145 150 155 160
Ser Asp Glu Glu Asn Cys Glu Ser Leu Ala Cys Arg Pro Pro Ser His
 165 170 175
Pro Cys Ala Asn Asn Thr Ser Val Cys Leu Pro Pro Asp Lys Leu Cys
 180 185 190
Asp Gly Asn Asp Asp Cys Gly Asp Gly Ser Asp Glu Gly Glu Leu Cys.
 195 200 205
Asp

<210> 45
<211> 47
<212> PRT
<213> Homo sapiens

<400> 45
Ser Cys Ser Ser Thr Gln Phe Lys Cys Asn Ser Gly Arg Cys Ile Pro
 1 5 10 15
Glu His Trp Thr Cys Asp Gly Asp Asn Asp Cys Gly Asp Tyr Ser Asp
 20 25 30
Glu Thr His Ala Asn Cys Thr Asn Gln Ala Thr Arg Pro Pro Gly
 35 40 45

<210> 46
<211> 89
<212> PRT
<213> Homo sapiens

<400> 46
Ser Cys Ser Ser Thr Gln Phe Lys Cys Asn Ser Gly Arg Cys Ile Pro
 1 5 10 15
Glu His Trp Thr Cys Asp Gly Asp Asn Asp Cys Gly Asp Tyr Ser Asp

	20	25	30												
Glu	Thr	His	Ala	Asn	Cys	Thr	Asn	Gln	Ala	Thr	Arg	Pro	Pro	Gly	Gly
			35			40					45				
Cys	His	Thr	Asp	Glu	Phe	Gln	Cys	Arg	Leu	Asp	Gly	Leu	Cys	Ile	Pro
			50			55				60					
Leu	Arg	Trp	Arg	Cys	Asp	Gly	Asp	Thr	Asp	Cys	Met	Asp	Ser	Ser	Asp
			65			70			75				80		
Glu	Lys	Ser	Cys	Glu	Gly	Val	Thr	His							
			85												
<210> 47															
<211> 170															
<212> PRT															
<213> Homo sapiens															
<400> 47															
Ser	Cys	Ser	Ser	Thr	Gln	Phe	Lys	Cys	Asn	Ser	Gly	Arg	Cys	Ile	Pro
			1			5			10			15			
Glu	His	Trp	Thr	Cys	Asp	Gly	Asp	Asn	Asp	Cys	Gly	Asp	Tyr	Ser	Asp
			20			25			30						
Glu	Thr	His	Ala	Asn	Cys	Thr	Asn	Gln	Ala	Thr	Arg	Pro	Pro	Gly	Gly
			35			40				45					
Cys	His	Thr	Asp	Glu	Phe	Gln	Cys	Arg	Leu	Asp	Gly	Leu	Cys	Ile	Pro
			50			55			60						
Leu	Arg	Trp	Arg	Cys	Asp	Gly	Asp	Thr	Asp	Cys	Met	Asp	Ser	Ser	Asp
			65			70			75			80			
Glu	Lys	Ser	Cys	Glu	Gly	Val	Thr	His	Val	Cys	Asp	Pro	Ser	Val	Lys
			85			90			95						
Phe	Gly	Cys	Lys	Asp	Ser	Ala	Arg	Cys	Ile	Ser	Lys	Ala	Trp	Val	Cys
			100			105				110					
Asp	Gly	Asp	Asn	Asp	Cys	Glu	Asp	Asn	Ser	Asp	Glu	Asn	Cys	Glu	
			115			120				125					
Ser	Leu	Ala	Cys	Arg	Pro	Pro	Ser	His	Pro	Cys	Ala	Asn	Asn	Thr	Ser
			130			135				140					
Val	Cys	Leu	Pro	Pro	Asp	Lys	Leu	Cys	Asp	Gly	Asn	Asp	Asp	Cys	Gly
			145			150			155			160			
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